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INTRODUCTION.

This REVIEW contains a general summary of the meteorological conditions which prevailed over the United States and Canada during June, 1885, based upon the reports from the regular and voluntary observers of the Signal Service and from co-operating state weather services.

Descriptions of the storms which occurred over the north Atlantic ocean during the month are also given, and their approximate paths shown on chart i.

The month has not been marked by any abnormal features.

The number of atmospheric depressions traced on chart i. and described under "Areas of low barometer," is seven, the average number for June during the last twelve years being 8.8.

The mean temperature was below the average over a greater part of the country; in the lake region and Rocky mountain districts the means were from 2° to 4° below the normal, the departures in other districts being less marked. Along the New Engtand coast, in the Gulf States, and a part of the Rio Grande valley the mean temperature was slightly above the normal.

The precipitation was above the average in the plateau districts, over the eastern slope of the Rocky mountains, in the extreme northwest, lower lake region, south Atlantic states, and Florida; it was below the average in New England, the middle Atlantic and Gulf states, and in the central valleys.

Except during the prevalence of the storm traced as number 3, which caused many disasters in the vicinity of Newfoundland, the weather over the north Atlantic has been generally moderate.

Large masses of ice have been observed in the north Atlantic during the month, the area of the ice-region being larger than in the same month of preceding years.

In the preparation of this REVIEW the following data, received up to July 20th, 1885, have been used, viz.: the regular tri-daily weather-charts, containing data of simultaneous observations taken at one hundred and twenty-nine Signal Service stations and sixteen Canadian stations, as telegraphed to this office; one hundred and seventy monthly journals and one hundred and sixty monthly means from the former, and sixteen monthly means from the latter; two hundred and eighty-six monthly registers from voluntary observers; reports from 1,307 special tornado observers; forty-six monthly registers from United States Army post surgeons; marine records; international simultaneous observations; marine reports through the co-operation of the "New York Herald Weather Service;" abstracts of ships' logs, furnished by the publishers of "The New York Maritime Register;" monthly weather reports from the New England Meteorological Society, and from the local weather services of Alabama, Illinois, Indiana, Iowa, Nebraska, and Ohio, and of the Central Pacific Railway Company; trustworthy newspaper extracts, and special reports.

ATMOSPHERIC PRESSURE.

[*Expressed in inches and hundredths.*]

The distribution of mean atmospheric pressure over the United States and Canada for the month of June, 1885, determined from the tri-daily telegraphic observations, is shown by the isobarometric lines on chart ii.

The mean pressure for the month is greatest over the region to the east of the Mississippi river south of the fortieth parallel, and on the north Pacific coast, where the mean pressure ranged from 30.0 to 30.05.

Two areas of barometric minima are shown on the chart, one over the Gulf of Saint Lawrence, indicated by the isobar for 29.8, and the other over the central and southern Rocky mountain districts, where the barometric means are below 29.8, a small area in southern Arizona being inclosed by the isobar for 29.75.

As compared with the mean pressure for the preceding month an increase is shown on the Pacific coast and to the eastward of the one-hundredth meridian, except in New England and the Maritime Provinces. The increase along the Pacific coast is about .05, while over the greater part of the country to the eastward of the meridian above named it varies from .05 to .10. In the Rocky mountain districts, New England, and the Maritime Provinces the mean pressure is lower than for May, the deficiency being greatest in the last-named district, where it varies from .10 to .13.

The departures from the normal pressure are given in the table of miscellaneous meteorological data, and are also exhibited on chart iv. by lines connecting stations of equal departures. On the north Pacific coast and over a part of the middle plateau, the mean pressure does not differ from the normal; in New England and the Maritime Provinces it is slightly below the normal, and in all other parts of the country it is above the normal, the departures being greatest over an area extending from the south Atlantic coast to the extreme northwest.

BAROMETRIC RANGES.

The monthly barometric ranges were greatest in the extreme northwest, Fort Buford and Bismarck, Dakota, reporting 1.18; the monthly ranges were least in the Rio Grande valley and in southern California, San Luis Obispo, California, reporting 0.21, the lowest for the month.

AREAS OF HIGH BAROMETER.

I.—At 7 a. m. of the 2d the weather charts exhibited an area of comparatively high barometer, inclosed by the isobar for 30.0 (.10 above the normal), extending from the lake region to the Gulf coast. At the succeeding report the pressure in the east Gulf states had diminished slightly, but over the lake region and central Ohio valley it remained unchanged. During the next twenty-four hours this area passed to the eastward and extended along the Atlantic coast from South Carolina to Maine, over which region the pressure remained above the normal until the morning of the 4th. Light frosts occurred in the lower lake region and New England on the morning of the 3d, during the passage of this area, which, however, was not attended by a marked fall in temperature.